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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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☐ 09/242,490    05/13/99    USUI

M	EXAMINER
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MM91/0529  
SUGHRUE MION ZINN MACPEAK & SEAS  
2100 PENNSYLVANIA AVENUE NW  
WASHINGTON DC 20037-3202

ART UNIT	PAPER NUMBER
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NGHIEM, M

DATE MAILED:  
2861

05/29/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

## Office Action Summary

Application No.

09/242,490

Applicant(s)

USUI ET AL.

Examiner

Michael P Nghiem

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 10 and 12 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☒ The proposed drawing correction filed on 07 May 2001 is: a) ☒ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

### Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

The Amendment filed on May 7, 2001 is acknowledged.

### *Specification*

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claim 12, said ink induction paths are **formed in a holder that is mounted in said enlarged portion, said holder including** a rod-shaped member that is positioned coaxially with said second ink supply path.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable

one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. How can a position between the two ink supply paths (Specification, page 9, lines 1-6) be a position which is "farthest away from the ink supply paths"? Does this mean that there are no other positions (in the ink-jet recording apparatus) which are further away from the ink supply paths?

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9, 11, 13, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Koto (US 4,368,478).

Koto discloses all the claimed limitations including:

- an ink jet recording apparatus (Fig. 3) comprising:
  - a recording head (51) for receiving ink supplied via a first ink supply path (path left of 53) and for ejecting ink droplets;
  - a second ink supply path (57) along which ink is transmitted from an ink

supply (58) to said first ink supply path, wherein said ink is transmitted in said second ink supply path generally in an ink transfer direction from said ink supply to said first ink supply path (ink transfer from 58 to 57 to first ink supply path, Fig. 3), wherein said second ink supply path comprises a connection portion (hole of 57b) that receives said ink from said ink supply and comprises an enlarged portion (portion including 55), and wherein a cross-sectional area of said enlarged portion, which is substantially perpendicular to said ink transfer direction, is greater than a cross-sectional area of said connection portion (cross-sectional area of 55 is larger than cross-sectional area of 57b), which is substantially perpendicular to said ink transfer direction (Fig. 3);

- a filter (53) which is located at a joint area (portion left of 55) that forms a communication portion situated between said first ink supply path and said second ink supply path, wherein said enlarged portion comprises at least a portion of said joint area (Fig. 3), wherein ink induction paths (56, Fig. 5, grooves between 90, Fig. 9a) are formed in said enlarged portion in order to use capillary attraction to induce the flow of ink through said filter (Fig. 3),

- said ink induction paths are constituted by projections (projections, Fig. 5, 90, Fig. 9a) that are radially formed at small pitches so as to capture an air bubble (90, Fig. 9a),

- grooves are formed between said adjacent projections in order to supply ink to said filter using capillary attraction (56, grooves between 90, Fig. 9a),

- said ink induction to an area that does not face said first ink supply path paths (grooves are extended away from the first ink supply path, Fig. 3),

- said ink induction paths are formed at positions that are farthest from said first ink supply path (positions in 55 where 56's are formed),

- said ink induction paths are formed as grooves (56, grooves, Fig. 9a),

- said ink induction paths are formed as ribs (ribs, Fig. 5, 90, Fig. 9a),

- said ink induction paths are integrally formed with said enlarged portion (grooves are integrally formed in 55),

- said ink induction paths are formed by mounting a groove formation member (94) in said enlarged portion (Fig. 9c),

- said ink induction paths are formed so as to be coaxial with said second ink supply path (Fig. 3, Fig. 9a),

- said ink induction paths include a layer having an affinity to ink (column 7, lines 5-8, 92, Fig. 9b),

- said enlarged portion is contiguous with said connection portion and is tapered in shape (tapered shape of 55, Fig. 3).

Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Koto (US 4,368,478).

Koto discloses all the claimed limitations including:

- an ink jet recording apparatus (Fig. 3) comprising:

- a recording head (51) for receiving ink supplied via a first ink supply path (path left of 53) and for ejecting ink droplets;

- a second ink supply path (55) along which ink is transmitted from an ink cartridge to said first ink supply path; and a filter (53) which is located at a joint area (area where 53, 54 are located) that forms a communication portion situated between said first ink supply path and said second ink supply path (Fig. 3), wherein ink induction paths (56) are formed at said joint area adjacent to said second ink supply path (Fig. 3) in order to use capillary attraction to induce the flow of ink through said filter, and said ink induction paths are extended from an ink inlet (inlet of 55) of said second ink supply path (Fig. 3).

***Allowable Subject Matter***

4. Claims 10 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


***Reason For Allowance***

5. The combination as claimed wherein said ink induction paths are formed by mounting a rib formation member in said enlarged portion or said ink induction paths are formed in a holder that is mounted in said enlarged portion, said holder including a rod-shaped member that is positioned coaxially with said second ink supply path is not disclosed or suggested by the prior art of record.

***Response to Arguments***

6. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. An inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at (703) 308-0956.

  
Michael Nghiem

May 24, 2001